

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: IL-Won Shin

GENERAL INFORMATION:

Name:	Kentucky 5 Star Energy, LLC
Address:	14890 US Highway 41 South, P.O. Box 189 Robards, KY 42452
Date application received:	4/4/2007
SIC Code/SIC description:	2869, Industrial Organic Chemicals, NEC (ethyl alcohol)
Source ID:	21-101-00139
Agency Interest:	84701
Activity:	APE20070001
Permit:	F-07-025

APPLICATION TYPE/PERMIT ACTIVITY:

<input checked="" type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
<input type="checkbox"/> Administrative	<input type="checkbox"/> Title V
<input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Synthetic minor
<input type="checkbox"/> Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☒ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Potential (tpy)
PM/PM ₁₀	87.70 / 76.00
SO ₂	39.08
NO _x	87.11
CO	72.71
VOC	89.16
Source wide HAPs	13.51

Note: Source not constructed. No actual emissions prior to application submittal.

SOURCE DESCRIPTION:

Kentucky 5 Star Energy, LLC (Kentucky 5 Star) is a proposed new fuel-grade ethanol production facility in Robards, Henderson County near Sebree, Kentucky. The facility has a proposed design capacity of 50 million gallons per year, with a maximum production capacity of 60 million gallons per year of undenatured ethanol or 63 million gallons of denatured ethanol on an annual basis. Emission sources at the facility include grain receiving, fermentation, distillation, dried distillers grain with solubles (DDGS) handling, DDGS drying, combustion, storage tanks, production loadout, and fugitives. The basis for the production of ethanol is to convert cornstarch to sugars and then convert the sugars to ethanol (i.e. grain alcohol).

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

In order to ensure that the facility remains exempt from the regulations for major sources of criteria and HAP emissions, Kentucky 5 Star is requesting a conditional major permit. Emissions will be limited to less than 90 ton/yr VOC, 22.5 ton/yr of total HAP, and 9 ton/yr of an individual HAP. Kentucky 5 Star has also requested source-wide limits for PM, PM₁₀, SO₂, NO_x, and CO. Monthly and rolling 12-month total emissions will be calculated. Emission calculations and supporting documentation will be retained at the facility.

OPERATIONAL FLEXIBILITY:

None